

REMARKS/ARGUMENTS

The allowance of claim 16 is noted.

Claims 1, 3 and 18 have been amended by substituting “formed” for micromachined into, since it is believed that formed is more accurate. Claim 3 has been amended to incorporate the subject matter of claims 5 and 7 which are now cancelled. Claim 23 has been amended to provide that a processor provides the operation of the micromachined ultrasonic transducers for mixing.

All of the claims are being rejected on the basis of the Bonne Patent No. 5,869,749. Boone teaches a micromachined integrated sensor which includes a light source, multi-layer interference filters, a sample glass cavity and flow sensors 19 and 58. A careful reading of the application indicates that the flow sensors are either thermal microanemometer or seize resistive sensing film embedded in a wall of a cavity. There is no teaching anywhere in this patent of micromachined capacitive, ultrasonic transducers of the type disclosed and used by applicant. There is no teaching as far as applicant can find, of the use of ultrasonic waves in any manner.

The membrane in Forster Patent No. 4,173,889 is for the purpose of facilitating the acoustic transmission between the probes not for reflecting ultrasonic waves.

Referring particularly to claim 1, it calls for a microchannel and a capacitive micromachined ultrasonic transducer formed in one wall of said microchannel. Clearly, there is no teaching of groups in Forester. Claim 2 is more specific. Claim 3 is more specific in calling for a semiconductor base with the capacitive of micromachined ultrasonic transducers formed in said base and a top having a micromachined groove sealed to the base with microgrooves over the ultrasonic transducer to form the microchannel. There is no teaching in the prior art of this combination. Claim 4 is more specific in calling for the dimensions. Claim 6 clearly distinguishes in calling for at least two transducers. Claim 8 calls for a compliant member opposite the transducer, and when read in combination with the claim from which it depends, distinguishes. Claim 15 depends from claim 4 and when read in conjunction with claims 3 and 4 defines a different and novel invention. Claim 18 is patentable for the same reason as claim 3, but is more specific in calling for silicone base material. Claim 19 calls for two transducers spaced along the channel, not suggested by the prior art. Claim 20 is depended from claim 18 and calls for a processor for operating a transducers in a pulse echo mode, clearly not found by

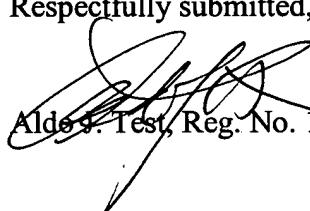
any of the references. Claim 21 not only calls for two transducers, but also a processor for operating a transducer to receive pulses from one another. Claim 22 calls for a compliant member opposite the ultrasonic transducer which is operated in a pulse cycle mode. Claim 23 is more specific in calling for a processor in the mixing of fluids. Claim 26 is patentable for the same reasons and is dependent on a different claim.

Applicant enclosed a Terminal Disclaimer and paid the required fee with the prior submission of this Amendment mailed August 25, 2004 to overcome the rejection based on obviousness-type double patenting.

In view of the above, favorable action is respectfully requested.

The Commissioner is hereby authorized to charge any other fees determined to be due to Deposit Account 50-2319 (Order No. A-69570/AJT(468330-1249)).

Respectfully submitted,


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